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CAROLINAS - VIRGINIA REPEATER ASSN. INC.

August, 1977 Volume 6, No. 3

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REPEATER JOURNAL

CAROLINAS - VIRGINIA REPEATER ASSN., INC

August, 1977 | Organized 1971 | Volume 6, No. 3

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◆◆◆◆◆◆◆◆

ON THE COVER

A familiar scene this Summer as Hams get Antenna work done. Here WB4ZIN, Buster and WA4YGD, Danny of Burlington work on a 220-mhz. repeater "J" Pole at the home of K4MOB.

AS WE SEE IT

With this issue of the CVRA, a new era has begun.

A new staff takes over the task of trying to keep you informed about happenings in the three-state area of Virginia, North Carolina and South Carolina.

This new staff is composed of myself, Wayne, K4MOB, Editor; Bill Parris, K4GHR, Associate Editor; Watson Gabriel, WB4EXW, Technical Editor; Ken Holliday, WA4DYY, Sales and Advertising Manager; Buster Brafford, WB4ZIN, Publisher; and Lindsay Cleveland, W4IZI, Circulation Manager.

Why is this a new era? Basically because only two editors have preceded me on this publication. Early in 1971, the North Carolina FM Repeater Association, Inc. was formed by a group of repeater owners interested in working together with one goal in mind . . . the betterment of two-meter operation, and the coordination of two-meter repeaters.

It was in those early months, Don Harris, W4BUZ, of Greensboro, published the first "Repeater Journal". A few months later, a 2nd Journal was published by another ham.

Contd. Page 4

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AMATEUR RADIO IS THE NAME COMMUNICATIONS IS THE GAME

–by Ed Alderman, WA4PEN, Pres.

Many comments have been made in recent months concerning repeater linking. Several CVRA groups have discussed and a few have tried some basic linking approaches. (There may be a few that are doing it on a regular basis, but of these we are unaware.) There is even one on the drawing board that will be a repeater to link repeaters. In this case a repeater with selectable frequencies located between two or more machines will be the linking enabling widely separated users to communicate with one another by using standard 2-meter transceivers.

Thus far serious local emergencies have occurred but primarily the kinds that could be well taken care of locally. As we move from Field Day season into potential hurricane season we might all profit from some retrospective review of Hurricane Hazel and consider some potential emergency communication alternatives. Linked repeaters are a viable approach but only if both machines can function independently of the power and phone lines in hurricane types of disasters. Many machines are still totally dependent on power lines although some groups have organized an emergency team to have the field day generator to their machine site for emergency service.

Frequently there are local emergency conditions which do not effect phone and power lines. Some recent tests were conducted between WR4ANP (Greensboro) trustee K4CJZ and WR4ACF (Raleigh, trustee WA4ZNA and REP.WA4PEN to test feasibility for emergency intercity communication via one WATS auto patch and one standard auto patch. This approach is certainly feasible. It may also be a bit startling for Guilford County mobiles to discover they have noise free communication with Raleigh bases and mobiles. There may be some technicalities to work out, such as: how to access a WATS line from the other end; or how to maintain confidentiality of a control line member; and what really goes in the "black box," But the approach is feasible—it really works! What's more important is the fact that in addition to making new friends in other cities, communication capabilities are greatly enhanced. And communication is the game.

ANNUAL CVRA MEETING AT SHELBY SEPT. 3rd AT GOVERNORS INN

The annual meeting of the CVRA will be held during the Shelby Ham Fest, Saturday night, Sept. 3rd at the Governor's Inn in Shelby. The get-to-gether will begin with a Dutch Treat dinner, beginning at 6:30 p.m.

President, Ed Alderman, urges all directors, full members and interested Associate members to attend. He said a nominating committee will be named for nomination of President, Vice-President, Secretary and Treasurer which according to by-laws of the CVRA are up for election before the end of the year.

Alderman, WA4PEN, said several other important items would be discussed at the meeting.

(cont.)

The annual meeting is open to any full-members (repeater owners and CVRA representatives) or any Associate Members who wish to attend. Their input and ideas will be welcome at the meeting.

He said it will also be an excellent opportunity for repeater owners to meet their State Directors, and Assistant Directors.

AS WE SEE IT

Continued from Page One

In mid 1971, Bill Parris, K4GHR, took the task of publishing the Journal. Bill in those days was writer, typesetter, advertising manager, circuilation, and bookkeeper, all essential in getting the publication before the membership. The first Repeater Directory was published in September of 1971 and listed 18 repeater groups, with 11 members of the FM Repeator Association.

In the November 1973 Journal, it was announced that several Repeater groups in South Carolina had joined the Association. Since there was no organized group in that State. Later at a November meeting, a motion was made and passed by the Association to change its name to "Carolinas-Virginia Repeater Association, Inc., representing the three states. The February 1974 Journal listed 53 repeaters in the 3-State area, on-the-air or planned.

As we enter the 3rd quarter of 1977, there are more than 151 2-meter repeaters on the air, or planned in our 3-state area. There are also fourteen 220-mhz. repeaters, and nine 6-meter and 17 450-mhz repeaters on or planned. This makes a total of over 190 Amateur repeaters.

With growth like this, it becomes more evident to us every day that Communications must be kept between all those repeater groups . . . new groups wanting to put on repeaters must be made to understand how important coordination is, and the repeater users must be made aware of problems and situations so they can act in a proper manner to prevent caos on our two meter and VHF and UHF frequencies.

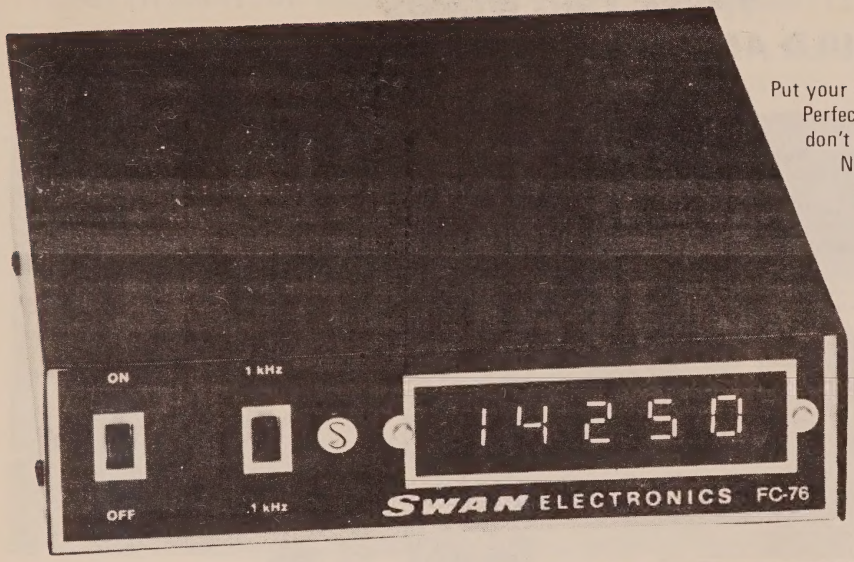
This, is the job of the CVRA Journal, and the Association. As I take over this job, I cannot help but be a little awed by what has taken place over the past six years in our 3-state area.

The CVRA Journal is a fine publication, and is read by hundreds of hams across the 3-states, plus clubs across the country, Manufacturers, ARRL and the FCC. It is a well respected publication and has more information than any in its class.

My associates and I have a job ahead. With your help in supplying information for us to publish, and your continued support of the CVRA, we can keep up and grow with Amateur Radio.

Some day, this Journal, which started off as a 6-page duplicated sheet, may be the Amateur voice of the mid-Eastern section of the country . . . who knows where we may go.

I cannot begin to describe what a good job Bill Parris has done with the Journal during his 6-year tenure. I, like you, can only offer him our thanks for keeping us informed through the excellent Journal publications he has produced. **Contd. Page 44**



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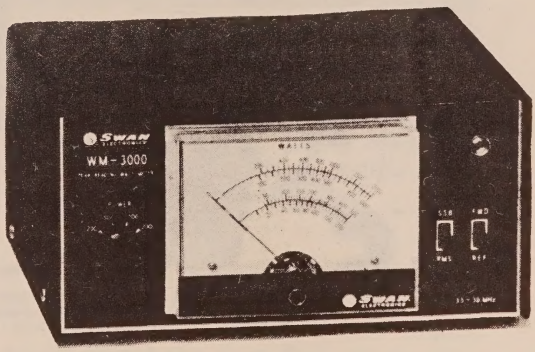

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Isn't it about time you afford yourself the best in two-meter equipment? The Wilson gear is quite affordable.

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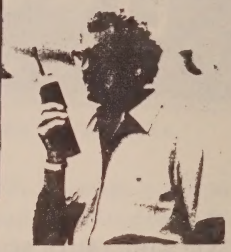

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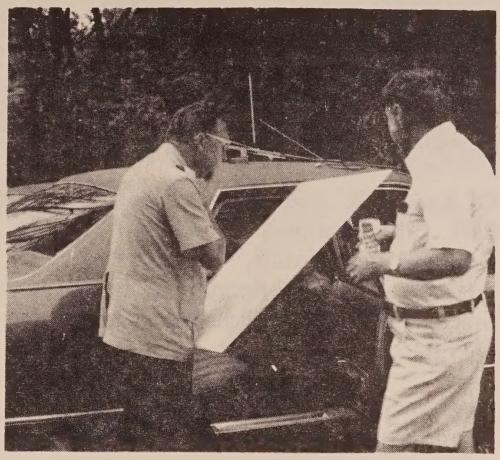
FORSYTH AMATEUR RADIO CLUB HOLDS FIRST TRANSMITTER HUNT

Brack, W4PJO, Bob, W4KGR, and Beachum W4RXG are all smiles as they proudly

Brack, W4PJO, Bob, W4KGR, and Beachum W4RXG are all smiles as they proudly congratulate each other as a team, after coming in first place at the Forsyth transmitter hunt.



Competition was keen at the Forsyth ARS hidden transmitter hunt recently. Here Conrad, K4BE and Jerry W4IAL, quickly check their maps after taking a directional reading on the hidden transmitter's signals.

On June 11, the Forsyth ARS (Winston-Salem) held their first hidden transmitter Hunt. The event started at 2 p.m. as searchers started from their homes to find the hidden transmitter. Some six teams, involving about 20 hams participated in the event.

Winners, by finding the transmitter first after about 42 minutes, was Brack, W4PJO; Bob, W4KGR; and Beechum, W4RXG. The last place team took about 2½ hours to find the transmitter, hidden by Fred, WB4UGW, and Steve, WB4SUD with assistance by Sam, WA4WKW.

The transmitter transmitted signals on 146.52 mhz. during the event, with coordination and start on the 04-64 repeater. The transmitter was hidden near Salem Lake, just East of the city.

The Forsyth ARS plans another Transmitter Hunt in early August to be followed by a cookout with all club members, wives and guests invited.

Edsel Murphy's Laws

When a problem actually is solved, the solution creates another problem worse than the original problem.

+ + + + + + +

The hidden flaw never remains that way.

+ + + + + + +

An easier way is discovered after you have already done it.

CVRA ASSOCIATE MEMBERSHIP CONTINUES TO GROW

Associate membership in the Carolinas-Virginia Repeater Association has passed the 1,270 mark as of July 20th. This is an increase of 65% since June of 1976. Last year there were 735 Associate members.

Of the 1270 members of CVRA, over 800 are members of ARRL. Adding full member totals, the CVRA now boasts over 1,500 members. Last year there were 934 Full and Associate members.

Any Amateur interested in VHF or UHF should become a member. The $2.00 annual Associate Membership fee is a small price to pay. Associate Membership Chairman, Lindsay, W4IZI reports membership growing each month, breaking records of previous months.

Every repeater user can be much more informed through the Journal, which is automatically received when joining. Becoming a member also gives the Association strength. Tell a friend about the CVRA. Tear out the application for membership found in this Journal and give it to him, urge him to join.

(Wayne, K4MOB & Lindsay, W4IZI)

POSSUM TROT NET ON 31-91

The Possum Trot Net is held daily Monday thru Friday mornings at 0615—0700 local time on the Fayetteville 31-91 repeater. The "Judge" of Spivey Corner reports a handsome certificate is awarded to anyone who checks in the Possum Trot Net for 5 consecutive mornings. (WA4LZD, Judge)

A SMALL CHANGE IS MADE IN REPEATER LISTINGS

For some time, in the Repeater listing you find in the center of the Journal, we have listed CVRA member repeaters with a "C" designation that this repeater is a member. We have also listed a repeater under construction with a "U".

Some changes have been made, beginning with this issue. The "C" designator for membership repeaters has been removed. Instead we are placing an "N" beside all repeaters who are NON-MEMBERS of the CVRA. The letter "C" will now represent repeaters which are UNDER CONSTRUCTION.

The Journal staff felt this would make it easier you in identifying members and non-members, and redesignating repeaters under construction. All other symbols remain the same and are identified on the repeater index page.

GRAND STRAND ARC

The Grand Strand Amateur Radio Club is very active in the Myrtle Beach area. Club officers for the 1977 year include: Eric Roberts, K4RF, Pres; Bill Robertson, WA4TKM, Vice-Pres.; Gene Collins, WA4GFL, Sec. Treas. and Wes Canfield, WA4EPB, Public Relations.

The Club has been conducting Novice classes during the year and also run the Grand Strand 2-meter net on the Myrtle Beach 01-61 repeater. The net meets Wednesdays at 9:00 p.m. local time. WR4AXC provides excellent coverage along the Grand Strand area of Myrtle Beach.

—WA4GFL Gene

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FCC HAS NO OBJECTION TO WR4ANP REVERSE AUTOPATCH

Editors Note: WR4ANP repeater in Greensboro recently installed a reverse Autopatch. At that time, Chuck Bino, K4CJZ, trustee, wrote a letter to the Commission describing and justifying the Reverse Auto Patch for WR4ANP. Bino received an answer from the Commission in Mid-July. The Commission in its letter stated, "Your Autopatch system therefore appears not to be in violation of any existing regulation, assuming all applicable third party traffic requirements are met.

The Journal Staff, felt that since this was a milestone for this area, printing the entire text of both letters would be the best way of presenting the facts.

Engineer in Charge
Amateur and Citizens Division
Federal Communications Commission

Dear Sir:

RE: Justification of WR4ANP Reverse AutoPatch

The purpose of this writing is not to request rulemaking, but to inform the Commission of a valuable adjunct to repeater operation, which is thought to be covered by provisions of Parts 97.

DESCRIPTION

In the case of our "reverse patch", unlicensed members of our group are able to call a special unlisted telephone which, when dialed, causes an audible ring on WR4ANP repeater, but only if the repeater is being actively used by a licensed operator. The operator then accesses the auto patch in normal fashion, identifies himself to the caller, and requests the intent of the caller. The caller identifies himself and makes his intentions known to the radio operator. The reverse patch is terminated by the amateur operator when the transaction of the information is complete.

This patch is equipped with electronic switching, so that the radio operator is in complete control at all times. His signal takes command and can override the phone audio if necessary. In addition, the repeater uses designated control operators at specific control points, so that the patch and repeater both can be shut down if the accessing operator is unable to do so. (97.79b & 97.3p) Therefore we have a redundancy of control while the patch is in service.

DEREGULATION AND NORMAL AUTO PATCHING

As a testimonial to the self-regulation and discipline of the Ham community, the Commission has seen fit to de-regulate the Amateur Service in many areas. For example, closed repeaters and those on automatic control preclude the use of control operators on duty (97.111). Auto patching as well as normal useage take place without formal supervision. Neither the patching or the repeater itself are actively monitored in such systems.

Part 97.79d, however, seems to put the responsibility to "continuously monitor and supervise" third party traffic on the station (usually mobile) who accesses such a patch.

CONTROL OF THE REVERSE PATCH

As stated in the description, the patch accessing radio station has precedence over the incoming phone call in commanding the repeater. Incoming radio autio will override telephone audio. Therefore, undesirable language or attempts at business useage, although not screenable beforehand, can be immediately terminated. Screening of third party message "content" prior to transmission is not normally done on non-repeater phone patches. It need not be done on the "reverse patch" either, since a pre-determined verbal format will label the legitimate user and the private phone number will have limited circulation within our own group. By maintaining a staff of duty controling stations at control points, and with the overriding capability of the radio signal, it is believed that this system complies with Part 97 in more stringent fashion than closed or automatic repeaters in their normal operations.

JUSTIFICATION

One can determine several reasons for non-licensed members of our group to communicate with this system. For instance, when reporting an incident to the Police, Fire, Sheriff, etc., these services could be used by such agencies to dial back and request further information from our reporting station.

When extreme weather conditions cause the National Weather Service or some other entity to notify local officials of an impending problem, these can be

Contd. Page 33

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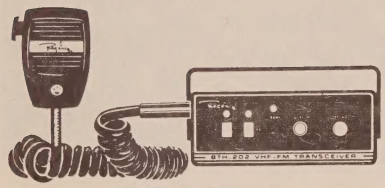

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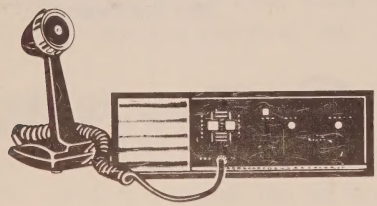

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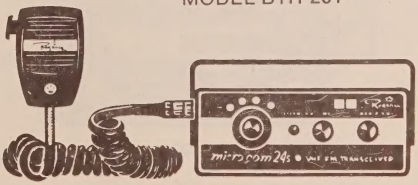

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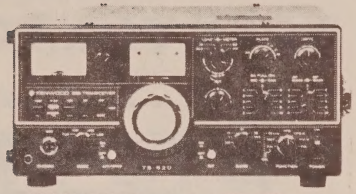

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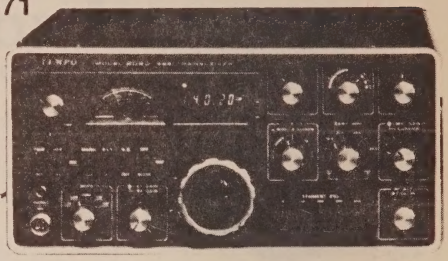

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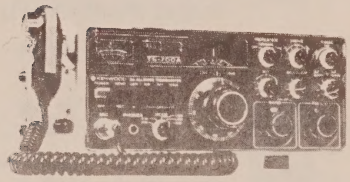

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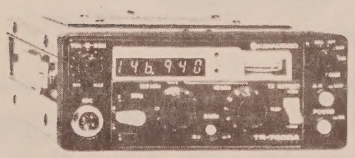

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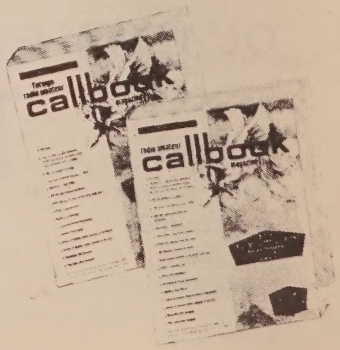

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NORTH CAROLINA NEWS

Kannapolis . . . . . .Mel Buchanan, W4DSU reports over 100 Novices receiving their licenses from classes held at the Rowan Technical Institute. These new hams and other hams are swelling the ranks in Cabarras and Rowan Counties. The Cabarras County ARS membership is growing steadily. The club meets every Monday at 7:30 p.m. at the Activity Building of the Kimball Memorial Lutheran Church in Kannapolis.

Concord/Kannapolis . . . .The .055 – .655 repeater is operating well in this area. The Trac 34 Motorola repeater feeds a Wacomm Duplexer, running 30 watts to the antenna. The repeater presently in a temporary location will be placed at an historic site in the near future. It will be placed on the 101 year-old clock tower, some 125 feet tall in Concord. Good coverage from WR4ABT (temporary call) is found in Cabarras, Mecklenburg, Rowan, Stanley, Union and Iredell counties. The groups will be joining the CVRA. (WR4DSU)

Winston-Salem. . . . . .The 915 – 315 repeater is operating well at its temporary location in Advance. Ray, K4QDM reports the group still trying to get a permanent site. He said they are working on a site in Kernersville, about 10 miles East of Winston, but no definite word is available at press time. The group is still waiting for their repeater call from the FCC. They are using the temporary call of WR4AJD.

Colfax . . . . . .The 223.28 – 224.88 repeater which was initially located at the home of Wayne, K4MOB was scheduled to be moved to Sauratown Mt. in late July. The 220 machine will be placed in a building owned by Beechum, W4RXG at the 1,800 ft level, on the SE side of the mountian. A temporary antenna has been mounted 35 feet off the building until the towers planned on the site are erected. The repeater will operate under the call WR4AOW. Coverage was unknown at press time, but it should prove to be a wide coverage 220 repeater. E.R.P. is 100 watts. This site will also house the 450 repeater planned in the future, by Beechum.

Durham. . . . . .The Durham FM Association reports their new 22 –82 local coverage repeater to be in service by the first of August. The new machine, a GE Master, to be located near downtown Durham will serve the City and Durham County. The 22 – 82 frequency was previously used by the group for the wide-coverage Hillsborough machine. That machine now operates on 147.825 – 147.225. The 22 – 82 repeater will be solely for the purpose of local coverage, and surrounding operators will be urged to use the Hillsborough repeater.

BURLINGTON. . . . . .The Alamance Repeater Association repeater 07-67 plans trustee changes. WB4ZIN plans to use WR4AKY call when free for future remote base operations. The new trustee of 07-67 will be Broadie Fitch, WA4HBQ.

NORTH CAROLINA NEWS

Tuckasegee . . . . . .A new repeater is planned for the Tuckasegee area in the western part of North Carolina, about 45 miles southwest of Asheville. The repeater is scheduled to operate on 147.90 – 147.30. The project is under construction by WA4FHN, Tom Harrington.

Winston-Salem. . . . . .The frequency of 223.10 – 224.70 was agreed upon by the CVRA Frequency Coordinating Committee for a new repeater to be operational by this fall in Winston-Salem. The new machine is being placed on the air by a number of teletype operators. The group has presently shifted from 2-meters to 220.70 direct for teletype operation. The repeater will be a converted Clegg FM-76 using a Phelps-Dodge Duplexer. Exact location for the machine is still to be worked out.

Hillsborough . . . . . .The 222.34 – 223.94 WR4AGC repeater will be undergoing some improvements in the near future. The RG-8 coax will be replaced with hardline. The Ringo-Ranger antenna will be replaced with a Phelps-Dodge Stationmaster. A new Phelps-Dodge duplexer will also replace the present one. The 60 watt amplifier will be returned to service when the duplexer is installed. The 220 repeater, one of the first ones in service in the area, presently has coverage from Winston-Salem and Greensboro, north to Lynchburg and Danville, and east to Smithfield. Herman, WB4DBB estimates 13 to 14 overall db gain to the transmitter and 5 to 6 db gain to the receiver when all the improvements are made.

Marion. . . . . .K4JCK, Bill Poole, reports the Marion repeater is on the air during daylight hours and weekends. WR4BBN is a GE Progress Line, running about 45 watts ERP through a homebrew six cavity duplexer into a Ringo-Ranger Antenna. The antenna height is 60 feet above average terrain. The machine was put together by K4JCK and Cecil Potter, WB4UCF of Pleasent Garden. Autopatch facilities are planned for the future, as well as a more permanent site. The machine located near Marion on I-40 operates on the split frequency of 147.705-147.105.

Mt. Airy . . . . . .The 37-97 repeater in the Mt. Airy continues its good coverage across Surry and surrounding counties. Bob Wiseman, WB4ULP reports plans for a autopatch for the machine in the near future. The equiptment has been obtained and is in the process of being interfaced with the repeater. Bob says the autopatch facility will enable hams to dial numbers through Surry County.

Statesville . . . . . .WR4ADG in Statesville continues to give good service from the home of Don K4PAJ. Plans to move the repeater to a permanent site are being delayed due to obtaining frequencies for the control link. The 01-61 repeater is supported by the Iredell County Amateur Radio Society. The club meets the 2nd Thrusday of each month.

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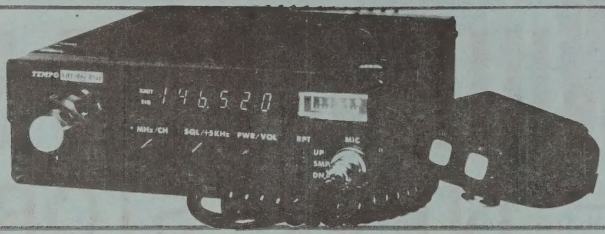

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NORTH CAROLINA NEWS

Burlington.....146.07/67, WR4AKY. The Alamance Repeater Assn. has replaced the old Progress Line equiptment with a new GE Master II Repeater. The all solid state machine has been in service since January and has proven to be very reliable. The repeater, operating from the Cane Mountian site, has good mobile coverage in Alamance and surrounding counties. The machine is operating with 89 watts ERP, with auto-patch facilities, 24 hours daily. Everyone is invited to check in on the Alamance AREC Net, that meets on the repeater each Monday, Wednesday and Friday nights at 9:00 pm .

Asheville.....The Western Carolina ARS reports N4EE, Wells Burton of Summerville, South Carolina won the annual CW contest at the Asheville Ham Fest July 16. N4EE won with a speed of 65 w.p.m. The contest started at 40 w.p.m. at 2:00 pm. Burton received a handsome trophy for his effort. The world CW record was established in 1939 at the Asheville Ham Fest at 75 w.p.m. (tnx WA4UTY)

Greensboro.....WR4AOD, the wide-area coverage 16/76 repeater has changed ownership. The machine previously operated by the late Bob Franklin, W4FRH; A.W. Greeson, W4AGD; Lee Brady, W4RPC; and Bob Best, W4JGA changed ownership in late July. The new group of owners assumed the name of the Greensboro Repeater Club, the club call WR4AOD and named Roger Alden, WA4MSS as trustee. Others in the group include: Brantley McAdoo, W4GFJ; Ken Holiday, WA4DYY; John Schnider, WB4VEH; Ed Hicks, K4HJE; Jerry Stubblefield, WB4EEM; John Washburn, WB4GGF and Bill Black, WA4BVK. Spokesman for the group to the CVRA Journal, W4GFJ said the machine would increase to 24-hour operation almost immeadiately. He said some improvements might be made in the future. The new owners have been an unofficial club or group for sometime, operating on 2-meter SSB, and operating on mountiansides for various ARRL contest and field days. A letter to the users of 16/76 is due in the mails in early August mapping out the changes. CVRA representatives will be Jerry, WB4EEM and Brant, W4GFJ.

Winston-Salem.....The Forsyth Amateur Radio Club held a Swapfest at their July meeting. Members and other amateurs brought equipment to sell, buy,swap, ect. Steve Minor, WB4SUD reports the unofficial totals for the Club during field day exercises in July included: 423 CW contacts, and 340 Phone contacts. They also got multiplier points by using total emergency power, initiating a message, and publicity. About 22 members participated during the Field Day Event. A second transmitter hunt followed by a cookout is being planned the first week of August.

VIRGINIA NEWS

NEW ASSISTANT DIRECTOR FOR TIDEWATER AREA

Carter Cogle, Virginia State Director for the CVRA reports the appointment of Wally Burkett, WA4KXV as Assistant State Director for the Tidewater area of Virginia. News assistance with coordination should be directed to Wally from that area, who will relay to Carter. Wally's address is 242 Raintree Road, Virginia Beach, Virginia 23452.

★★★★★★★★★★★★★★★

Portsmouth.....The local Portsmouth Civil Defence group of Amateurs is concentrating an effort to get 25/85 repeater on-the-air. No other information is available at press time about the proposed repeater.

Richmond.....The Richmond Amateur Telecommunications Society (RATS) expects to have their new Master II solid state autopatch repeater on by journal press time. A new Super Stationmaster is planned as soon as the new Channel 23 TV tower is constructed about May 1978. The RATS club has had excellent growth during the past year under guidance of Perry, W1COW. The President is Milt, K4FZZ. Membership exceeds 110 at this time.

Petersburg.....The two Petersburg repeaters, 99/39 and 90/30 are operting well now, serving local hams. The 90/30 repeater was off-the-air for a short period, but has now resumed operation. WR4ATB, 90/30 is a CVRA member.

Farmville.....The new VHF Engineering repeater in Farmville is operating well. The 31/91 machine, WR4ASW covers the area well. The machine is a member of CVRA.

Petersburg.....The Crater Amateur Radio Club now has a new meeting time. They are now meeting on the 4th Wednesday of the month at 7:30 pm in Room 210A at the John Tyler Community College.

Danville.....The White Oak Mt. Repeater 10 miles North of Danville is now fully operational. The repeater operating on 10/70 received its call in June, WR4BDN. Coverage of the repeater is very good to the south and excellent to the north. Mobile access is good for distances of 50 miles or better. Base stations 100 to 125 miles are regular users of the repeater. The repeater is housed in a converted truck body beside a 120 foot tower. A super Stationmaster is fed through a Phelps-Dodge duplexer. The Last Capitol Service Net is held on the repeater each Tues., Thurs. and Sun. nights at 2030. (WA4JIY & K4WQS)

VIRGINIA NEWS

Martinsville . . . . . .A 2-meter repeater is in the planning stages for Martinsville in the near future. CVRA coordination is expected through Jesse Bowles, WB4WRD. No frequency has been chosen or recommended at Journal press time. (WA4SUB)

Roanoke . . . . . .Since changing to a standard split, 385/985, WR4AFY continues operating with full coverage of the Roanoke Valley and surrounding area. The repeater, one of the oldest in the state operated on 146.38-146.98 for many years. It is owned and operated by the Roanoke Valley Amateur Radio Club.

South Hill . . . . . .The 84/24 repeater in South Hill only a few months old is serving the area well. New antennas are planned for the repeater. The repeaters new call is WR4BBU. It is carrier access and on-the-air continuously.

Richmond . . . . . .The 34/94 Richmond repeater (WR4ADI) has been purchased by the Richmond Amateur Radio Club. Extended operating hours are anticipated in the future.

Louisa . . . . . .A new repeater is under construction near Louisa Virginia, west of Richmond on Interstate-64. The machine sponsored by WD4BPP will be on the air soon on 87/27.

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SOUTH CAROLINA NEWS

Greenville . . . . . .The Monday Dutch Lunch Club every Monday, at the S & S Cafeteria, meets at 1:00 PM. It is going so well that strange hams passing through the area now stop over for the fun.

Toccoa, Ga. . . . . .The Toccoa Club's repeater, 146.19/79 will have a duplexer installed shortly and will give good coverage between Greenville, S.C. and Gainesville, Georgia.

Savannah, Ga. . . . . .We understand there is a 146.10/70 machine here as well as two others now operating but no direct info received on them.

Greenville . . . . . .Wade Holland, W4AZT, will be operating an experimental machine on 146.10/70. It will be open and will be used to develop a variety of controllers, patches, etc. The call is WR4AHJ.

SOUTH CAROLINA NEWS

Greenville . . . . . .Blue Ridge Amateur Radio Society had a very successful Field Day. Over fifty members took part and the transceivers ran around the clock. Ray Allison, K4SUG did an excellent job of organiziang this FD and Bill McCollum, WB4TNS, produced such gourmet food as smoked turkey, standing rib roast and the always present hot dog for the mob. Old timers like Smitty, W4ILP, showed up with well oiled antique bugs for the c-w contacts. Local repeaters and direct were used extensively for co-ordination of this event.

Greenville . . . . . .Blue Ridge Amateur Radio Society will hold its annual picnic on August 13th. It is a covered dish affair and if the food this year matches that of 1976, the members, wives and children will have a great time. There will be picking and singing (?) by such masters as WA4NRU, W4QDU, K4TOY, and other musicians too miserable to mention.

Anderson. . . . . .The Anderson Radio Club, along with the Athens and Toccoa, Ga., clubs will hold a family style picnic at Lake Hartwell on August 21 and 22nd. This is a bring your own food affair and we might as well warn you that some of the musicians listed for the Blue Ridge mixer threaten to attend this one also.

Laurens. . . . . .WR4AZM is now operating full time with a duplexer and Id'er at the new location atop the water tower. The members were required to build a house for the machine and then install a fence around it before the local city authorities were satisfied. Coverage is excellent in the area on 146.25/85.

Greenwood . . . . . .The Greenwood Club now has auto-patch operating on this 147.75/15 repeater. This machine fills in the gap between the Greenville and Augusta repeaters.

White Hall . . . . . .This 146.31/91 machine now has telephone line control and is on full time with solid coverage from Charleston to Savannah, Ga.

Charleston. . . . . .The Palmetto Chapter QCWA held it's summer lunch meeting on May 9th with excellent attendance. Membership is now almost to the hundred mark. Palmetto has three State-wide lunches each year; Spring in Greenville, Summer in Charleston and Columbia in the Fall. Any of you old timers in the Carolinas that were licensed twenty-five years or more ago are invited to join Palmetto Chapter. Applications for National QCWA and Palmetto Chapter may be had from J. T. Lyman, W4FMZ, 1174 Ellis Ave., Orangeburg, SC 29115.

DISTRIBUTION OF TWO METER REPEATERS

	NORTH CAROLINA	SOUTH CAROLINA	VIRGINIA
01/61	Statesville	Greenville, Myrtle Bch.	Lynchburg, Abingdon
025/625	Kannapolis	–	New Market
04/64	Asheville, Raleigh	Sumter	Richmond
	Winston-Salem	–	–
055/655	Concord/Kann.	–	Alexandria
07/67	Burlington, Forest City	Columbia	Barren Springs
	Laurinburg	–	–
085/685	–	–	McLean
10/70	Marion Greenville (Tn)	Lancaster, Charleston, Greenville	Dan/White Oak, Richmond
	–	Savannah (Ga)	Portsmouth
115/715	Fayetteville	–	–
13/73	Salisbury, Wilmington	No.Augusta	Hampton, Roanoke
145/745	Kingsport (Tn)	–	–
16/76	Grifton, Greensboro, Asheville	Charleston, Columbia	Bluefield W Va, Charlottesville
175/775	–	–	–
19/79	High Point, Johnson Cty	Chester, Toccoa (Ga)	Chesapeake, Fairfax, Lynchburg
205/805	Gastonia	–	–
22/82	Durham, Roaring Gap	Greenville	Winchester, Arlington
	Wilmington	–	–
235/835	–	Columbia (147.255 in)	Portsmouth
25/85	Hickory, Reidsville, Seven Spgs.	Laurens	Afton
265/865	–	–	–
28/88	Raleigh, Shelby, Bristol (Tn)	Columbia, Savannah (Ga)	Bristol, Roanoke, Richmond
195/895	–	–	–
31/91	Fayetteville, Lexington	White Hall	Tyson's Corner, Farmville
	Murfreesboro	–	Blacksburg
325/925	–	–	–
34/94	Aurora, Durham, Manteo	Charleston, Columbia	Hampton, Roanoke
	Charlotte, Jacksonville	Greenville, Augusta (Ga)	Richmond
355/955	–	–	–
37/97	Mt.Airy, Smithfield, Kings Mtn.	Anderson, Florence, Savannah	Bull Run
385/985	Albemarle	–	Roanoke
40/00	High Point, Jacksonville	Pickens	Suffolk
60/00	Bristol (Tn)	–	–
615/015	–	–	–
43/03	Irwin	Rock Hill	Richmond, Blacksburg
63/03	Greensboro	–	–
645/045	–	–	–
46/06	Charlotte, Elizabeth Cty	–	South Boston
475/075	–	–	–
66/06	–	Sumter	–
675/075	–	–	–
69/09	Greenville	Orangeburg, Spartenburg	Galax
705/105	Marion	–	–
72/12	Greensboro,Rocky Mt.,Gastonia	Augusta (Ga)	Warrenton, Culpepper
735/135	–	–	–
75/15	Durham, Morganton	Greenwood	Williamsburg
765/165	–	–	–
78/18	Charlotte, Sanford	–	–
795/195	–	–	–
81/21	Lake Toxaway, Greensboro	–	McLean
	Lumberton, Gastonia	–	–
825/225	Durham	–	–
84/24	Franklin, Shelby, Eden	–	Woodbridge, South Hill
	Pine Bluff	–	–
855/255	–	–	–
87/27	Greensboro, Benson	Clemson, Charleston	Gum Springs, Louisa
885/285	–	–	–
90/30	Burlington, Tuckasegee	–	Petersburg, Berryville
915/315	Winston-Salem	–	Alexandria
93/33	Lenior, Fayetteville	Augusta (Ga)	Lexington
945/345	–	–	Danville
96/36	Roanoke Rpds, Boone	Columbia	Washington (DC)
975/375	–	–	–
99/39	Charlotte	–	Petersburg
30/90	Charlotte	–	–

NORTH CAROLINA

2 Meter Repeaters

Ahoskie	WR4AFB	146.31	146.91		A
Albemarle	WR4BBX	146.385	146.985		
Asheville	WR4ALC	146.04	146.64		
Asheville	WR4AEV	146.16	146.76		
Asheville	WR4ANY	146.31	146.91	N	A
Aurora	WR4ABQ	146.34	146.94		
Benson	WR4ARL	147.87	147.27		A
Boone	WR4ATQ	147.96	147.36		
Burlington	†WR4AKY	146.07	146.67		A
Burlington	WR4AIF	147.90	147.30		A
Charlotte	WR4AEU	146.34	146.94		A
Charlotte	WR4AWQ	147.99	147.39		
Charlotte	WR4ALO	146.46	147.06		A
Charlotte	WR4ABK	147.78	147.18		
Charlotte	WR4AJX	147.30	147.90	N	
Concord/Kann.	†WR4ABT	146.055	146.655	N	A
Durham	WR4AJV	147.75	147.15	N	
Durham	WR4AJY	146.34	146.94	NAT	
Durham	WR4AGC	146.22	146.82		A
Eden	WR4AZX	147.84	147.24		
Erwin	WR4ALY	146.43	147.03		
Elizabeth City	WR4ADN	146.46	147.06		A
Fayetteville	WR4ANN	146.31	146.91		A
Fayetteville	WR4BCA	146.115	146.715	N	P
Fayetteville	WR4ADK	147.93	147.33		
Forest City	WR4AHA	146.07	146.67		A
Franklin	WR4ALD	147.84	147.24		
Gastonia	WR4BAD	146.205	146.805	L	
Gastonia	WR4ATP	147.72	147.12		
Gastonia	WR4AXH	147.81	147.21		A
Greensboro	WR4AOD	146.16	146.76		
Greensboro	WR4ANP	147.72	147.12		
Greensboro	WR4ANL	147.81	147.21	N	
Greensboro	WR4AWZ	147.63	147.03		A
Greensboro	WR4BBE	147.87	147.27		A
Greenville	WR4AMB	147.69	147.09		A
Grifton	WR4ABP	146.16	146.76		
Hickory	WR4ACM	146.25	146.85		
High Point	WR4AFV	146.19	146.79	N	
High Point	WR4ADT	146.40	147.00	N	A
Hillsborough	WR4AGC	147.825	147.225		
Jacksonville	WR4AJG	146.40	147.00		A
Jacksonville	WR4ATW	146.34	146.94		A
Kings Mtn.	WR4AYN	146.37	146.97		C
Lake Toxaway	WR4AGH	147.81	147.21		
Laurinburg	WR4AOX	146.07	146.67		
Lenoir	WR4ARG	147.93	147.33		
Lexington	WR4ABX	146.31	146.91		A
Lumberton	WR4AUA	147.81	147.21		
Manteo	WR4AKB	146.34	146.94		
Marion	WR4BBN	147.705	147.105		C
Morganton	WR4AQI	147.75	147.15		
Mount Airy	WR4ACJ	146.37	146.97		A
Pine Bluff	WR4	147.84	147.24	N	P
Raleigh	WR4ACF	146.04	146.64		A
Raleigh	WR4AOE	146.28	146.88		A
Reidsville	WR4ADE	146.25	146.85		
Roanoke Rapids	WR4	147.96	147.36	N	P
Roaring Gap	WR4AGS	146.22	146.82		
Rocky Mount	†WR4ADN	147.72	147.12		
Salisbury	WR4AAA	146.13	146.73		A
Sanford	WR4ADK	147.78	147.18	N	
Seven Springs	WR4AEF	146.25	146.85		A
Shelby	WR4ABF	146.28	146.88		
Shelby	WR4AWU	147.84	147.24		A
Smithfield	WR4	146.37	146.97		C
Statesville	WR4ADG	146.01	146.61		
Tuckasegee	WR4	147.90	147.30	N	C
Wilmington	WR4AHL	146.22	146.82		
Wilmington	WR4AVF	146.13	146.73	N	C
Winston Salem	WR4ARD	146.04	146.64		A
Winston Salem	†WR4AJD	147.915	147.315		

NORTH CAROLINA Cont.

50 Mhz Repeaters

Asheville	WR4ALC	52.01	53.99	O
Cary	WR4	52.35	53.35	
Durham	WR4ASZ	52.15	53.15	
Fayetteville	WR4ADK	52.07	53.07	
Hickory	WR4ACM	52.78	52.525	
Mocksville	WR4AJD	52.17	53.17	

220 Mhz Repeaters

Asheville	WR4AEV	222.34	223.94		
Durham	WR4AGC	222.34	223.94		
Durham	WR4ASZ	222.50	224.10		
Graham	WR4AYO	223.22	224.82	N	
Lexington	WR4ABX	222.30	223.90		P
Lexington	WR4ABX	223.30	224.90		P
Locust	WR4BBA	222.40	224.00		
Morganton	WR4AQI	223.22	224.82		C
Raleigh	WR4ACF	223.04	224.64		P
Raleigh	WR4	223.34	224.94	N	P
Sauratown Mtn	WR4AOW	223.28	224.88		
Winston Salem	WR4	223.10	224.70		C

450 Mhz.Repeaters

Asheville	WR4ALE	449.90	445.90		C
Charlotte	WR4AEI	450 PRIVATE		N	
Charlotte	WR4ALO	449.85	444.85		C
Concord	WR4	PLANNED		N	
Durham	WR4AGC	449.10	444.10	A	
High Point	WR4ADT	447.90	442.90	N	
Moyoke	WR4BBP	447.10	442.10		C
Sauratown Mtn	WR4AOW	448.00	443.00	N	C

SOUTH CAROLINA

2 Meter Repeaters

Anderson	WR4AIO	146.37	146.97		A
Charleston	WR4ASP	146.16	146.76		A
Charleston	WR4	146.10	146.70	N	A
Charleston	WR4	147.87	147.27		C
Charleston	WR4AFX	146.34	146.94		T
Chester	WR4	146.19	146.79	N	C
Clemson	WR4	147.87	147.27		C
Columbia	WR4ASE	147.96	147.36		A
Columbia	WR4ACD	146.34	146.94		T
Columbia	WR4ABA	146.28	146.88	N	
Columbia	WR4AYE	146.16	146.76		
Columbia	WR4	147.255	146.835	N	
Columbia/Irmo	WR4	146.07	146.67		C
Florence	WR4AGM	146.37	146.97		
Greenville	WR4AHJ	146.22	146.82		A
Greenville	WR4ADG	146.01	146.61		
Greenville	WR4ABG	146.34	146.94		T
Greenville	WR4AHJ	146.10	146.70		C
Greenwood	WR4AUE	147.75	147.15	A	
Lancaster	WR4ABM	146.10	146.70	A	
Laurens	WR4AZM	146.25	146.85		
Myrtle Beach	WR4AXC	146.01	146.61		
North Augusta	WR4ABB	146.13	146.73		
Orangeburg	WR4AQY	147.69	147.09	A	
Pickens	WR4ADP	146.40	147.00		
Rock Hill	WR4AJO	146.43	147.03		
Spartenburg	WR4	147.69	147.09		P
Sumter	WR4	147.66	147.06	N	P
Sumter	WR4AOI	146.04	146.64	N	
White Hall	WR4AQL	146.31	146.91		

SOUTH CAROLINA Cont.

450 Mhz Repeaters

Charleston	WR4ASP	449.10	444.50	T

50 Mhz Repeaters

Columbia	WR4	52.05	53.05	C

VIRGINIA

2 Meter Repeaters

Abingdon	WR4ATJ	146.01	146.61	N	
Afton	WR4	146.25	146.85		P
Alexandria	WR4ATZ	147.915	147.315	N	
Alexandria	WR4AXB	146.055	146.655	N	
Arlington	WR4AQP	146.22	146.82	N	
Barren Springs	WR4AFQ	146.07	146.67	N	
Berryville	WR4APE	147.90	147.30		L
Bluefield W Va	WR4AXS	146.16	146.76	N	
Blacksburg	WR4AXT	146.31	146.91	N	C
Blacksburg	WR4	146.43	147.03	N	C
Bristol	WR4AFZ	146.28	146.88	N	
Bull Run	WR4ADZ	146.37	146.97	N	T
Charlottesville	WR4ATL	146.16	146.76		
Chesapeake	WR4ACN	146.19	146.79		A
Culpepper	WR4	147.72	147.12	N	P
Dan/White Oak	WR4BDN	146.10	146.70		
Danville	WR4AHG	147.945	147.345	N	
Fairfax	WR4ADD	146.19	146.79	N	
Farmville	WR4ASW	146.31	146.91		
Galax	WR4AHR	147.69	147.09		
Gum Springs	WR4BBI	147.87	147.07	N	
Hampton	WR4ALW	146.13	146.73		
Hampton	WR4AFT	146.34	146.94	N	T
Lexington	WR4ABU	147.93	147.33	N	
Louisa	WR4	147.87	147.27		
Lynchburg	WR4AXO	146.01	146.61		
Lynchburg	WR4ADY	146.16	146.76		A
Martinsville	WR4	—	—	N	P
McLean	WR4APC	147.81	147.21	N	RA
McLean	WR4	146.085	146.685	N	P
New Market	WR4ATG	146.025	146.625	N	P
Norfolk	WR4ANT	146.10	146.70		C
Petersburg	WR4ATB	147.90	147.30		
Petersburg	WR4AWC	147.99	147.39	N	
Portsmouth	WR4	146.25	146.85	N	
Richmond	WR4ADI	146.34	146.94	N	T
Richmond	WR4ACW	146.28	146.88		A
Richmond	*WR4ACW	146.43	147.03		
Richmond	*WR4ACW	146.10	146.70		R
Richmond	WR4BBZ	146.04	146.64	N	P
Roanoke	WR4AMQ	146.13	146.73	N	C
Roanoke	WR4AFE	146.28	146.88		
Roanoke	WR4AFY	146.385	146.985		
Roanoke	WR4AHT	146.34	146.94	N	
South Boston	WR4AYU	146.46	147.06	N	A
South Hill	WR4BBU	147.84	147.24		
Staunton	WR4ACL	146.34	146.94		
Suffolk	WR4AKS	146.40	147.00		A
Tyson's Corner	WR4ABR	146.31	146.91	N	A
Virginia Beach	WR4AAC	146.37	146.97		A
Warrenton	WR4	147.72	147.12	N	P
Washington DC	WR3AGX	147.96	147.36	N	
Williamsburg	WR4	147.75	147.15	N	P
Winchester	WR4AGT	146.22	146.82		
Woodbridge	WR4AII	147.84	147.24	N	A

VIRGINIA Cont.

50 Mhz Repeaters

Abinston	WR4ATJ	52.01	53.01	N	L
Lexington	WR4ABU	52.01	53.01	N	
Norfolk	WR4ATK	53.525	52.525	N	C

220 Mhz Repeaters

Tyson's Corner	WR4AEY	222.34	223.94	N	
Woodbridge	WR4AIJ	223.22	224.82	N	P

450 Mhz Repeaters

Alexandria	WR4ANC	442.05	447.05	N	
Alexandria	WR4AAG	439.25	427.25	N	V
Charlottesville	WR4AYG	449.25	446.00	N	
Chesapeake	WR4ACN	449.95	444.95		P
Ft. Belvoir	WR4AJT	444.125	449.125	N	
Paris	WR4ANJ	444.80	449.80	N	
Richmond	WR4	444.50	449.50	N	P
Roanoke	WR4AHT	447.75	443.75	N	C
Tyson's Corner	WR4ARB	444.75	449.75	N	
Woodbridge	WR4AII	444.90	449.90	N	

GEORGIA BORDER REPEATERS

Augusta		147.72	147.12	N	C
Augusta		146.34	146.94	N	
Augusta	WR4ALS	147.93	147.33	N	
Savannah	WR4AOW	146.10	146.70	N	
Savannah		146.28	146.88	N	
Savannah	WR4AKF	147.37	147.97	N	
Toccoa	WR4AYM	52.025	52.525	N	
Toccoa	WR4AHB	146.19	146.79		

REPEATER SYMBOLS

N	Non Member CVRA	C	Under Construction
A	Autopatch	P	Proposed
T	Tone Access	O	Off Air Temporary
*	Alternate Freq.	V	Television
†	Temporary Call	R	RTTY
L	Linked		

JOIN YOUR REPEATER ASSN.
YOUR SUPPORT HELPS US TO
HELP FUTURE REPEATERS
AND KEEPS OUR FREQUENCIES
CLEAR OF INTERFERENCE!

VHF NET REGISTER (Local Times Indicated)

Two Meters — FM

Anderson SC	37/97	WR4AIO	Anderson Radio Club Net	Daily	2000
Asheville NC	16/76	WR4AEV	Western North Carolina Tfc. Net	Tue	2030
Benson NC	87/27	WR4ARL	Johnson ARS Net	Daily	1930
Burlington NC	07/67	WR4AKY	Alamance County AREC Net	MWF	2100
Catawba County NC	146.82		Catawba County RACES Net	Mon	1900
Charlotte NC	34/94	WR4AEU	Metrolina 2 Meter Emer. Net	Daily	2100
Danville Va.	10/70	WR4BDN	Last Capitol Service Net	TThSn	2030
Fayetteville NC	31/91	WR4ANN	Cape Fear ARS Net	Daily	1900
Florence SC	37/97	WR4AGM	Florence 2 Meter Net	Mon	2000
Greensboro NC	72/12	WR4ANP	Guilford County Emer. Net	Thu	2100
Greensboro NC	87/27	WR4BBE	CVRA Information Net	Wed	2030
Greenville NC	146.52		Brightleaf ARS Net	Tue	2100
Greenville SC	01/61	WR4ADG	Blue Ridge ARS Net	Daily	2100
Greenwood SC	75/15	WR4AEU	Abbeville-Greenwood Emer. Net	Tue	2200
Grifton NC	16/76	WR4ABP	ENC Emergency Net	Thu	2000
Hampton Va.	34/94	WR4AFT	Hampton Roads Emer. Net	Wed	2000
Laurinburg NC	07/67	WR4AOX	Sand Hills Emergency Net	Daily	1930
Lynchburg Va.	01/61	WR4AXO	Lynchburg Two Meter FM Net	Tue	1900
Myrtle Beach SC	01/61	01/61	Grand Strand 2 Meter Net	Wed	2100
Raleigh NC	04/64	WR4ACF	RARS Net	MTThF	2000
Richmond Va.	28/88	WR4ACW	Amateur Traffic & Trouble Net	MTWTh	2030
Salisbury NC	13/73	WR4AAA	Central North Carolina Tfc. Net	Daily	2200
Sumter SC	04/64	WR4AOI	Sumter Repeater Assn. 2 meter Net	Mon.	2130
White Hall SC	31/91	WR4AQL	Coastal ARA 2 Meter Net	Thu	2100
Winchester Va.	22/82	WR4AGT	Shenandoah Valley Service Net	Daily	1915
Winston-Salem NC	04/64	WR4ARD	Forsyth County AREC/RACES Net	Wed	2100

TWO METERS — SSB/CW/AM

Tidewater Sideband Net	Norfolk Va	145.025	Tue	2100
North Carolina 2 meter SSB Net	Greensboro NC	145.025	Tue	2000
Midwestern SSB Net	Cincinnati Ohio	145.020	STTh	2100
S.L.O.T. Net	Greenville SC	145.100	MWF	2215
Hampton Roads Emergency Net (AM)	Norfolk Va	145.800	Mon	2000
Mid Atlantic 2 meter Net	Washington DC	145.100	Wed	2100

SIX METERS

Interstate Net (SSB)	Atlanta Ga	50.110	Tue	2100
Dixie Net (SSB)	Charlotte NC	50.110	Wed	2100
Charlotte Hornet Net (AM)	Charlotte NC	50.400	Sun	2100
North Carolina 6 Meter Net (SSB)	Glendale Springs NC	50.120	Sun	0900
Central Virginia Net (AM)	Richmond Va	50.250	Daily	1900
Tidewater SSB Net	Norfolk Va	50.150	Tue	2000

HAMFEST CALENDAR

August 13 & 14 . . . . . Gastonia NC
August 13 & 14 . . . . . Bristol Tn.
October 2 . . . . . Rock Hill SC
August 14 . . . . . Fayetteville NC
September 3&4 . . . . . Shelby NC

NORTH CAROLINA

Asheville
Western North Carolina ARC, 1st Thur. 2000, Buncombe Health and Welfare Bldg., 2nd Monday 1915 Grace Restaurant on Merrimon Street.

Benson
Johnson ARS 3rd Thur. 1930, at 50-210 Fire Station WR4ARL (27)

Burlington
Alamance ARC 2nd & 4th Monday 1930, at 230 E. Summit Ave.

Burlington
Alamance Repeater Asso. Inc. 4th Sat. 1900 at B & J Cafeteria WR4AKY (67)

Cary
Cary ARC 4th Thur. 1930 at White Plains Methodist Chruch, WR4AOE (88)

Charlotte
Mecklenburg ARS Last Tue. 1930-Red Cross Bldg on Park Rd. W4BFB/WR4AEU (94)

Charlotte
Charlotte RC 1st Thur. 1900 Club Bldg.-WSOC-TV N. Tryon St. W4CQ/WR4ALO (06)

Charlotte
Friday Lunch Group Fri. 1200 - Mediterranean Rest. on Independence Blvd.

Durham
Durham FM Assn. 2nd Tue. 1800- K&W Cafeteria at University Mall in Chapel Hill WR4AGC (82)

Eden/Reidsville
Rockingham County ARC 1st & 3rd Mon., 1900, Wentworth Courthouse

Fayetteville
Cape Fear ARS 3rd Mon. 1900- Methodist College, WR4ANN (91)

Greensboro
Greensboro RC Fri. 1930- Club House near Friendship Airport W4GG

Greensboro
Peidmont ARS 3rd Fri. 1830- Bonanza Sirloin Pit Rest., High Point Rd.

Greensboro
Ladies in Amateur Radio Soc. 2&4 Thur. 1830 Shoneys on High Point Rd.

High Point
High Point ARC Tue. 1930- Old Mill Rd. WR4AFV (79) & WR4ADT (00)

Jacksonville
Onslow ARC 2nd Sat. 1000- Howard Johnsons Restaurant WR4AJG (00)

Kannapolis
Cabarras County ARS 3rd Mon. 1930, Activity Bldg., Kimball Memorial Lutheran Church

Laurinburg
Scotland County ARS 1st Wed. - Cablevision Office, WR4AOX (67)

Lexington
Healing Springs Mountain VHF Soc. Last Mon. 1930- Burlington House Furniture Co. Personnel Office W4PAR/WR4ABX (91)

Lumberton
Lumberton ARC, 3rd Thu. Robeson County Public Library at 1930

Raleigh
Raleigh ARS 1st Wed. 1930- CD Rm NC State Admin. Bldg W4DW/WR4ACF (64)

Salisbury
Rowan ARS 2nd & 4th Mon. 2000-Salisbury City Hall, Main Street W4EXU/WR4AAA (73)

Shelby
Shelby Radio Club 2nd Mon. 1830 Hungry Bull Restaurant, Dutch Supper

Statesville
Iredell County ARS, 2nd Thur.

Winston-Salem
Forsyth Amateur Radio Club, 2nd Friday - Nature Science Center

Wilmington
Wilmington VHF Assn., 2nd Tue. of Jan., Mar., May, July, Sept., & November at Carolina Savings & Loan College Road Social Meeting in other months at location announced. WR4AHL (82)

CLUB MEETING CALENDAR

SOUTH CAROLINA

Anderson
Anderson RC 4th Thu. 1930 - Anderson County Library WR4AIO (97)
Charleston
Holiday VHF Soc. 2nd Wed 1930 - Pinehaven Shopping Center Meeting Room, WR4AFX (94)
Charleston
Trident ARC 1930 3rd Thur. Park Circle Presbyterian Church
Columbia
Carolina Repeater Society 1st Mon. 1930 Providence Presbyterian Church WR4ACD (94)
Florence
Florence FM Repeater Assn. 3rd Mon. 1930 Florence Darlington Technical Center
Greer
Greer ARC 1st Mon. 1930 Meeting Location announced monthly, WR4ABG (94)
Greenville
Blue Ridge ARS 1st Tue. 1930 Red Cross Building 3rd Tue. Dinner.
Greenville
The Dutch Lunch Club - Mon. S&S Cafeteria at 1245.
Greenwood
Piedmont Tec ARC, 1st Mon. 1930 at Piedmont Tec, WR4AUE (15)
Keeowee
Keeowee - Toxaway ARC, 3rd Tue, at Keeowee Toxaway Visitors Center.
Orangeburg
Orangeburg ARC 1st Thu. 1930 at Tennelec on Hwy 301 North, WR4AQY (09)
Sumter
Sumter Repeater Assn. 3rd Mon. 2000 City/County Office Building Conference Room WR4AOI (64)
Walterboro
Costal Amateur Radio Assn. 2nd Sat. 1900, meeting announced on 31/91 net.

VIRGINIA

Charlottesville
University of Virginia ARC every other Thu. 1930 Thornton Hall, W4UVA
Charlottesville
Albemarle ARC 2nd Wed. 1930 at City Courthouse on 4th Street NE. WA4TFZ
Lynchburg
Lynchburg ARC 2nd Fri. 2000 at Beulah Baptist Church, Leesville Road, K4HEX
Newport News
SPARC 1st & 3rd Wed. 1930 at Vepco Building in Hampton, WR4ALW (73)
Norfolk
Hampton Roads Radio Assn. meeting time announced, WR4ACN (79)
Petersburg
Crater ARS - 4th Wed. 1930 John Tyler Community College
Richmond
Richmond Amateur Telecommunications Soc (RATS) 1st & 3rd Fri. 1930 at the stone house in Forrest Hill Park, WR4ACW (88)
Virginia Beach
Virginia Beach ARC 1st Tue. 1930 at Virginia Beach Recreation Center, WR4AAC (97)
Winchester
Shenandoah Valley ARC 1st/3rd Fri. 2000 Club Building on Grace Street WR4AGT (82)

CLUB SECRETARIES! Is your club and meeting times mentioned in the Journal Correctly. If you do not have your club listed, or changes occur in the club schedule, please send all changes to the Journal Editor and we'll get it changed.

Gastonia Hamfest

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AUGUST 13 & 14

Al Bradshaw, W4WDE
R.F.D. 1, Box 284
Kings Mountian, NC 28086
Phone – 704-867-1635

Jack Lucas, W4AOJ
214 Nassau Place
Gastonia, NC 28052
Phone – 704-864-0762

Eloise Frank, WA4LWX
Rt. 2 Box 387
Kings Mountian, NC 28086
Phone – 704-739-5093

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CENTURY MARK REACHED IN REPEATER MEMBERSHIP

–by Bill Page, WB4LWX and Wayne Williams K4MOB

The Carolinas-Virginia Repeater Association passed the 100 mark in Repeater memberships as of July 1, 1977. (Two more were added in late July) This is the first time this number has been reached. These figures represent Repeater Associations who have signed up as full members. Some Associations run 2 or more repeaters, and all repeaters run by an Association or Club with CVRA membership, count as CVRA member repeaters. Compiling figures by counting repeaters in the three states of North Carolina, South Carolina and Virginia, and dividing by CVRA member Associations or clubs, we come up with some interesting figures:

NORTH CAROLINA

There are presently about 97 repeaters on-the-air or under construction in the state. This includes 2-meters, 220 mhz., 6-meters and 450 mhz. There are 55 repeater groups full members of CVRA who manage 76 repeaters. This gives North Carolina a percentage of 78% CVRA Full Membership.

SOUTH CAROLINA

South Carolina presently has about 31 repeaters on-the-air or under construction. Of these, the State has 25 repeater groups who are CVRA members, representing 25 repeaters. Together this represents 77% of the State in Full Membership.

VIRGINIA

The Old Dominion has a total of 63 repeaters, not counting Washington areas. Fifteen repeater groups, representing 21 repeaters are full members of CVRA. This figures to a percentage of 33% membership in the CVRA. It SHOULD be pointed out however, that Northern Virginia repeaters counted in this survey are in T-MARC territory and naturally are members of T-MARC.

CONCLUSION

The CVRA is well represented in the two Carolinas, and moving ahead in the Virginia area. Overall average, counting the Northern T-MARC repeaters, the CVRA represents about 63% of ALL repeaters in the 3-State area.

Every Amateur working a repeater should urge his repeater owners to become full members of the CVRA, and every repeater user should become Associate Members of CVRA.

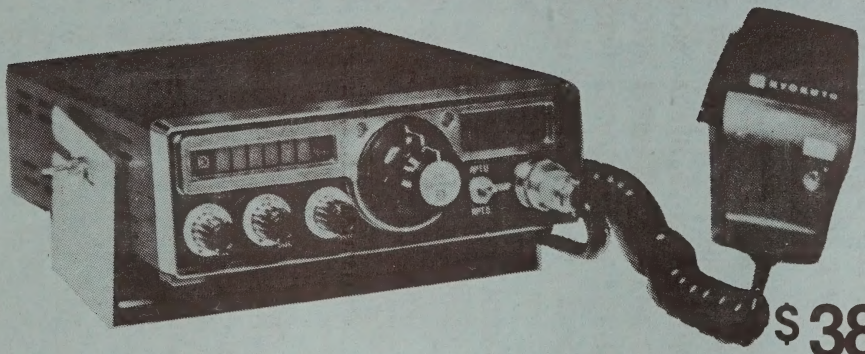
HELP NEEDED EVERYWHERE !

The CVRA Journal staff receives dozens of newsletters from all over the area and country. The most common problem seems to be the lack of assitance to the editor of those publications, whether it be a one-page typewritten newsletter, or a magazine type such as your Journal.

The staff usually is faced with the same problem, lack of news. Our magazine covers a three state area. There are numerous news items occuring everyday somewhere within our circulation area. We cannot write about it if we don't find out about it. If you know something newsworthy, write your local club newsletter editor, your Journal editor or any other media representative. You'll help your publication to be more informative, and you'll help your club get more publicity.

KDK

FM144-10SXR-II



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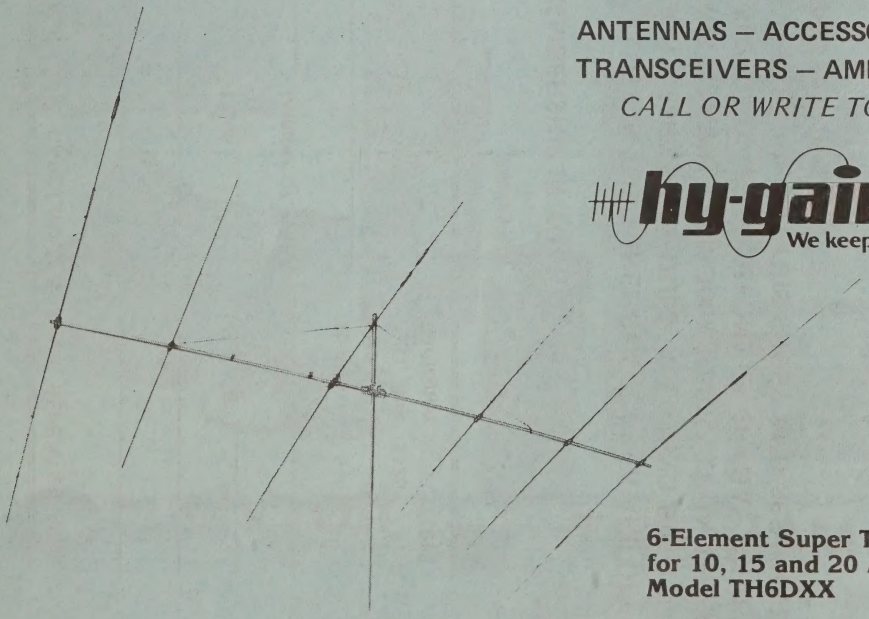

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ASSOCIATE MEMBERSHIP APPLICATION CAROLINAS-VIRGINIA REPEATER ASSN.

Name: _____ Date: _____

Address: _____ Call: _____

City: _____ State: _____ Zip: _____

Phone: (_____) _____ Member of ARRL? _____

The Repeater I call "home" is: _____

Enclosed is: $_____ ($2.00 Per Year)

J R

Mail to:
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100% CVRA MEMBERSHIP IN YOUR CLUB!

ITS NOT A BAD IDEA AT THAT! MANY CLUBS IN THE THREE-STATE AREA ARE OFFERING SPECIAL DEALS TO MEMBERS THROUGH MEMBERSHIP DUES, ALLOWING EVERYONE TO BECOME MEMBERS OF THE CVRA, THUS MAKING THEM 100% INVOLVED IN THE ASSOCIATION. YOUR CVRA NEEDS YOUR SUPPORT. ASK SOMEONE EVERYDAY. GIVE THEM THE APPLICATION FORM ON THE REVERSE SIDE OF THIS SHEET AND SEE THAT THEY MAIL IT TO THE ASSOCIATE MEMBERSHIP CHAIRMAN.

THE FOUR ISSUES OF THE JOURNAL PER YEAR IS WELL WORTH THE MEMBERSHIP FEE. YOU'LL FIND INTERESTING ARTICLES ABOUT YOUR NEIGHBOR HAMS, THE MOST UP-TO-DATE REPEATER DIRECTORY FOR THE 3-STATE AREA ANYWHERE, NET REGISTERS, CLUB MEETING CALENDAR AND MUCH OTHER GOOD READING IN THE JOURNAL.

MAY WE ADD YOUR NAME TO THE MEMBERSHIP?

Phone:
683-1597
688-3501
688-6311

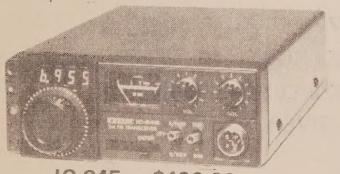
Vickers

520 EAST MAIN ST. P.O. BOX 8648 DURHAM, N.C. 27707

SAM – WB4 ROC *RON – WA4BID* *JIM – WD4HML* *TED WD4CXR*

ICOM

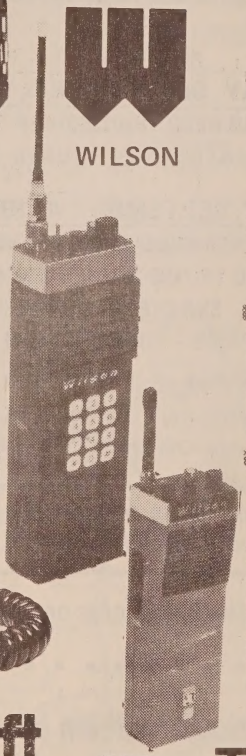
IC 211 – $749.00



IC 245 – $499.00

IC 22S – $299.00

WILSON



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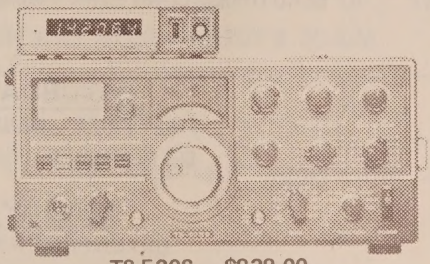
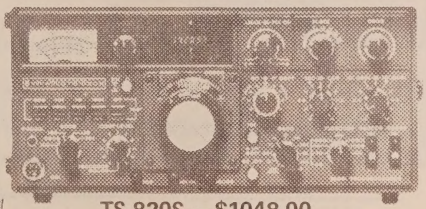
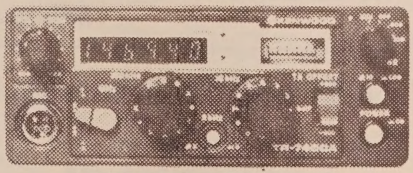


TS-520S – $828.00



TS-820S – $1048.00



TR-7400A – $399.00

cushcraft CORPORATION

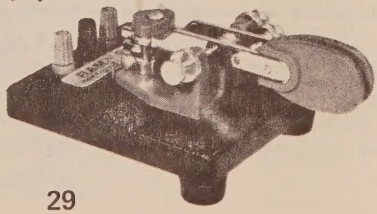
Larsen Antennas

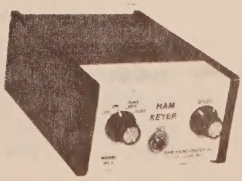
Larsen Antennas, to fit Any Mobile Unit

hf engineering
DIVISION OF BROWNIAN ELECTRONICS CORP.

AMECO

THE HAM-KEY





TALK-IN FREQUENCIES

146.28-146.88 146.52-146.52
146.94-146.94 3.923

SHELBY

"The Best In The Southeast"

SATURDAY, SEPTEMBER 3, AND SUNDAY, SEPTEMBER 4, 1977

AT BEAUTIFUL CEDAR PARK – 15 MILES NORTH OF SHELBY, NC (NC No. 10 See Map)

PRIZES

SATURDAY, SEPTEMBER 3,1977

FIRST PRIZE – HAND HELD TRANSCEIVER- Tempo FMH
SECOND PRIZE – DENTRON SUPER TUNER- 160–10 AT

SUNDAY, SEPTEMBER 4, 1977

GRAND PRIZE – KENWOOD TS-820 TRANSCEIVER
SECOND PRIZE – KENWOOD TR-7400-A, VHF FM PHASE LOCKED LOOP SYNTHESIZED TRANSCEIVER
THIRD PRIZE – TRI-BAND BEAM

YOU DO NOT HAVE TO BE PRESENT TO WIN THE TEMPO, KENWOOD, TRI-BAND BEAM OR DENTRON PRIZES.

NO MEMBER OF THE SHELBY RADIO CLUB OR ANY MEMBER OF THEIR FAMILY IS ELIGIBLE TO WIN ANY PRIZE.

OUR 21st HAMFEST, WE ARE GIVING AWAY IN EXCESS OF $ 2300.00 WORTH OF PRIZES ! ! !

GOOD FOOD!!! Delicious Southern Fried Chicken and Fresh Pit Cooked Barbecue With All The Trimmings ALL YOU CAN EAT!!!

Sunday School at 10:00 A.M. – Playground for children – Free BINGO for the family – Trailer and Camping available ($ 3.50/night) – Plenty of shelter in the event of rain – Many items of new equipment on display – Plenty of trading and swapping (no charge for tailgaters) – Special table reserved for the "Southern Coffee Club" – Annual meeting of the CVRA will be held Saturday, Sept. 3, 6:30 pm at the Governors Inn, Dutch Treat Supper.

HAMFEST

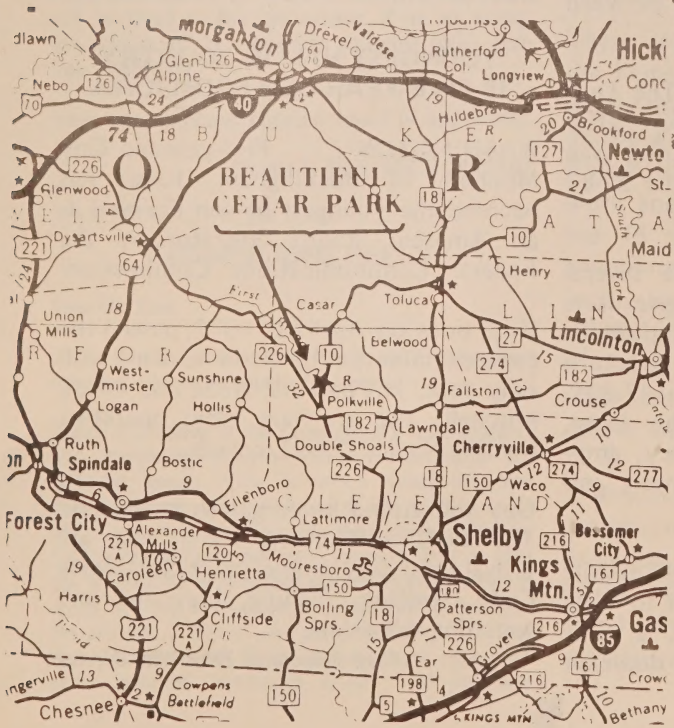
TR-7400 A SECOND PRIZE

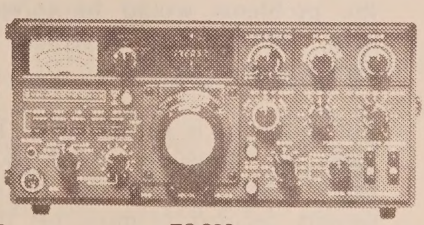
DUE TO A HOLIDAY WEEKEND, THE FCC WILL NOT BE ABLE TO GIVE EXAMS.

FULL REGISTRATION (WITH MEAL)	ADULTS $6.00
FULL REGISTRATION (WITH MEAL)	CHILDREN (UNDER 12) $3.50
REGISTRATION ONLY (WITHOUT MEAL)	$2.50

REGISTRATION WILL BEGIN ABOUT 9:30 A.M.

Due to GROWTH of Hamfest, all non-traders and non-campers are requested to park across the road from Cedar Park.





TS-820
GRAND PRIZE

Some of the motels in the area are listed below. They advise calling well in advance as their weekend business is good and reservations may be a problem.

SHELBY –
Holiday Inn, Governors Inn, Hagers.

KINGS MOUNTAIN –
Royal Villa.

GASTONIA –
Mid-town, Holiday Inn, Howard Johnson, Scottish Inns.

GAFFNEY –
Holiday Inn.

FOREST CITY –
Gardo's, Isothermal, Goode's.

LINCOLNTON –
Town & Country

HICKORY –
Howard Johnson, Holiday Inn, Mull's, Ramada Inn.

HILLSBOROUGH AND ROARING GAP – A HAPPY ENDING FOR ALL

–by Wayne C. Williams, K4MOB

For several years, Roaring Gap, and Hillsborough both operated on 22-82. In the beginning there were no problems. But as two-meters grew, so did activitie. Although the repeaters were located well over 150 miles apart, they both stood out as outstanding repeaters in coverage. Problems began when operators in Greensboro and other areas located between the two repeaters began using one or the other machine..

The Durham FM Association and the Roaring Gap owners began meetings when interference became somewhat of a problem. Both groups talked in a cordial manner and each agreed that the problems would be solved somehow, without any bitterness between owners and users.

The problem is solved now. The Durham FM Repeater Association after many meetings with the Roaring Gap owners decided to move off the 22-82 frequency at Hillsborough.

The announcement was made several months before the move, to give users time to obtain crystals. July 2nd, Hillsborough went off the air, only to return at noon the same day on 147.825-147.225. The repeater is the same, retuned to the newer frequency, amplifier turned back to full power, and pre-amps tuned.

The machine now continues solid mobile coverage from East of Raleigh to West of Greensboro. The repeater, a G.E. Master Pro has a Phelps-Dodge duplexer feeding a Super Stationmaster antenna. A Vanguard pre-amp is on the receiver. Repeater output is 110 watts into a new run of Heliax cable. Autopatch is available also.

Coverage of the Roaring Gap repeater has also spread further Eastward. Although no changes have been made to the machine, the absence of Hillsborough on the frequency now gives a clear signal from Roaring Gap to the Burlington area.

The change of Hillsborough to 825-225 gives them a clear interference free channel, and leaves Roaring Gap with a clear channel. The move made two outstanding repeaters in the Piedmont area of North Carolina, even better.

YOUNGEST HAM IN COUNTRY IS FIVE-YEAR-OLD FROM IOWA

WASHINGTON . . . . Five-year-old Guy Mitchell, of Buckingham, Iowa, has become the youngest person licensed as an Amateur Radio Operator by the Federal Communications Commission.

Guy, born on April 30, 1972, passed the code examination on April 15 while still only four. His parents, Wade and Cindy Mitchell, also are ham radio operators holding Novice Class Licenses.

Guy will attend kindergarten in the fall. The FCC, announcing the license approval, said Guy enjoys practicing Morse Code, spelling, reading, bicycling and watching television.

–Ctsy Associated Press Wire Service

quickly relayed to the Ham community via the "reverse patch".

Family members of our licensed Ham community will be able to communicate urgent information directly to the licensed party.

The purpose of this system is not to circumvent the Amateur rules by allowing non-licensed persons to speak over the repeater, but to provide another means by which Amateur Radio can better serve "in the public interest, convenience, and necessity".

Although the immediate need for this system may not be overwhelming, it should be available to our membership when required.

If Special Temporary Authority is indicated, please consider this writing an official request. If, as myself and many others, you believe that Parts 97 and "good engineering and amateur practice" (97.77) cover the situation, we would use the system and be delighted to inform your staff of the results.

It is unlikely that our proven abilities to self-police will be taxed by this new system. If we are wrong, the system will be terminated and your office notified accordingly.

Your comments and criticism would be appreciated.

Charles F. Bino, K4CJZ, WR4ANP

COMMISSIONS REPLY

Dear Mr. Bino:

Thank you for your letter of May 6, 1977, about your so-called "reverse autopatch" system.

There is nothing in the Commission's rules specifically concerning telephone interconnection in the Amateur Service. Your autopatch system therefore appears not to be in violation of any existing regulation, assuming all applicable third party traffic requirements are met. We note, however, that as long ago as 1972 the Commission warned amateur licensees about the use of autopatch equipment to facilitate the business affairs of any party, a violation of Section 97.114 of the Rules. We are more concerned about so-called "autopatch abuse" than ever and trust your system will be operated in a manner ensuring compliance with both the letters and the spirit of our regulations.

We appreciate your interest in the Amateur Radio Service.

Charles A. Higginbotham
Chief, Safety and Special Radio Service

●●●●●●●●●●●●●●●

DEAD TIRED

The next time people ask you why you are so tired, tell them, your exhaustion is justified and you can prove it by a few simple statistics: The U.S. has a population of 200 million. Of these, 72 million are over 65, leaving 128 million people to do the work. When you subtract the 75 million under 21, you get 55 million.

There are also 27,471,002 employed by the Federal Government in one capacity or another, which leaves 25,528,998 to do the work. The 8 million in the Armed Forces leave only 17,528,998 to do the work and when you subtract from this the 15 million on the state and city government payrolls and the 1,520,000 in the hospitals, mental institutions and similar places, the work force is reduced to 1,520,000. Fine -- but there are a estimated 800,500 bums, vagrants and others with a pathological fear of work.

That leaves 208,500 people to carry the national workload, 208,496 of whom are presently behind bars. Which, Brother, leaves YOU and ME and I don't know about you, but I'm getting Tired!!! Too tired to research the above figures.

-- *Ctsy. Cape Fear ARS News*

wave in air is very much the same as its velocity in a vacuum so the velocity of propagation is unity, or one. This is why v is left out of the formula much of the time. The situation changes when we are speaking of our transmission line for example. To illustrate let us use RG-8/U coax with polyethylene dielectric (not the "foam" type). We want to use the velocity of propagation constant to help us find the "electrical" length of a half wavelength of coax at 146 MHz. We always want to use "electrical" lengths in our dealings with antennas and transmission lines as this takes into account the time (remember: speed of rf changes with the medium) taken for the RF wave to travel from one point to another. RG-8/U with the polyethylene dielectric has a velocity of propagation factor, v, of 0.66. This says that RF energy travels thru the transmission line with a velocity that is 66 percent of its velocity in free space. Now let's see what changes take place in our calculations:

$$(L/2)\ physical = \frac{492}{f\ (MHz)}$$

$$= \frac{492}{.\ 146\ MHz}$$

$$= 3.37\ ft.$$

$$(L/2)\ electrical = \frac{492\ v}{f\ (MHz)}$$

$$= \frac{492\ (0.66)}{146\ MHz}$$

$$= 2.22\ ft.$$

Notice how the electrical half wavelength of coax is shorter than the physical length to allow for the reduction in velocity. This keeps our time span in its proper perspective. Another phenomenon applies to the driven element of an antenna whether it be wire, rod, or tubing. This factor is called the length/diameter ratio, or K. It is put in the same spot as V in the preceding equations. The antenna length required to resonate at a giving frequency (forgetting any dielectric or other effects) is dependent upon the ratio of the length of the conductor to its diameter. The "thicker" the element or wire, the shorter its physical length must be for a given electrical length. Wire antennas used at HF usually have very large length/diameter ratio, and K (from graphs in ARRL publications) is close to unity. Here a half wavelength antenna is only about 2% shorter than a half wavelength in space.

The situation changes when the length/diameter ratio is 100 or less which often occurs in VHF antenna construction. Here the K factor may be on the order of 0.95 to 0.96. This would make the driven element almost 5% shorter than free space half wavelength.

As one can see, the calculation for the length of our antenna element can be somewhat confusing. There are other effects such as end effect, proximity to ground and nearby objects, element spacing, and boom diameter that most of the time cannot even be calculated. Part

Contd. Page 36

CONFLICTING HAMFEST DATES ..... ARE THEY HURTING ATTENDANCE

– by Wayne C. Williams, K4MOB

In my profession, I have occasion to attend most all of the Hamfests in the Carolina's and Virginia. Several times over the past 3 years, I've found two or three scheduled the same weekend. This made the choice of which to attend quite hard.

For example, during the weekend of July 16 and 17th this past month, Burlington and Cary both had Hamfests on Saturday, and Asheville on Saturday and Sunday. The two on Saturday were spaced only about 50 miles apart, with the Saturday and Sunday event about 200 miles away. All three Hamfests being in North Carolina, the same weekend obviously had to hurt.

During the weekend of August 13 and 14th, three Hamfests were scheduled, Gastonia, Fayetteville, and Bristol (Tn) The clubs putting on the Hamfests are not at fault. They have no real way of knowing which is the best weekend. Larger Hamfests are coordinated through ARRL. The smaller affairs are not, causing the problem of not having information available as to when other Hamfests in the State will be planning.

The Carolinas-Virginia Repeater Association, through the Journal will attempt to assist ALL clubs planning Hamfests for 1978. We will do this by trying to obtain data and schedules of upcoming Hamfests and publish them each issue.

Beginning with this August Issue, you will find the Hamfest Schedule through September and October on the Net Register Page.

For the coming year, all clubs planning to sponsor a Hamfest, are urged to write the Editor of the CVRA Journal as soon as they set the date for their Hamfest. The Journal staff will keep records, and if any conflict occurs on any weekend in 1978, we will write all clubs involved and give them a chance to work out new dates while there is still time. All dates confirmed will be published in the upcoming Journals, keeping clubs still in the planning stages as informed as possible.

Clubs are also invited to write the Journal Editor for scheduling information. We cannot suggest any schedules, but can give you information that we have on hand at that time.

This system can work only if EVERY club in the Carolinas, Virginia and Tennessee participate and let the CVRA Journal staffers know their schedule as soon as possible.

Clubs should plan early each year and set their Hamfest dates as early as possible, and send dates to the CVRA Journal editor who will check against any other club planning Hamfests, and confirm the status of that date. Small clubs should keep in mind the every year standard schedule of Hamfest of larger clubs, such as Charlotte in Feb., Durham in March, Raleigh in April, Manassas in June, Norfolk, Charleston, Winchester & Shelby.

Scheduling a Hamfest on any of the weekends of the larger Hamfests would obviously hurt your attendance.

Good luck on your scheduling, getting a free weekend for your Hamfest could make the difference between success and failure. And the CVRA will make every effort to help you be assured of a free weekend. Be sure to mail your scheduled Hamfest dates to the CVRA editor as soon as you set the date and we'll do all we can to help.

COMMUNICATIONS 77 HELD IN GREENSBORO JULY 30-31

The largest ARRL sanctioned Communications exhibition to be held in this 3-State area was presented the last weekend of July in Greensboro at the Coliseum. The show which featured seminars both days ranging from microprocessers to FCC seminars by Jerry Freeman, and Emergency Communications, was open to the General Public, and Amateurs. FCC walk-in examinations were also available.

Some 125 exhibitors were on hand as well as a large flea market all in the air-conditioned exhibition hall of the Greensboro Coliseum. Equipment shows, NASA exhibits, live TV broadcasts highlighted the exhibition.

Congressman L. Richardson Preyer and other dignitaries were scheduled to be on hand for ribbon cutting ceremonies Saturday morning.

Communications 77 was sponsored by the Greensboro Amateur Radio Association, Inc. and the Greensboro Coliseum.

GASTONIA TO HOLD HAMFEST AUGUST 13 & 14

The Gaston County ARS is sponsoring its first Hamfest, to be held Saturday and Sunday, Aug. 13 and 14. The event will be at the Ramada Inn in Gastonia at the Intersection of I-85 and Highway 274 (Bessemer City Exit).

Parking for campers will be available with no hookups, however a KOA campground is near by. An indoor Fleamarket will be featured. Prizes will be available and a Hospitality Room on Saturday night. Talk-in is on 72-12 or 28-88.

ENC REPEATER GROUP HOLDS PICNIC AND BOARD MEET

The Eastern North Carolina Repeater, Inc. club, operators of the Grifton 16-76 Repeater held their 4th Annual ENC picnic last July 17th, at Glen Bournie Park, New Bern. Lunch was on the grounds. Other events during the day for members and families included a transmitter fox hunt, a contest for XYL's and boating at the nearby Neuse River. A Board of Directors meeting was also held.

* * * * * * * * *

of these explain the sometimes "weird" expressions we see for some amateur antenna construction articles. Explanations for these other effects can best be found in ARRL and other publications. Hopefully some of this does show why we usually end up "pruning" our antennas for resonance unless this operation has already been done for us by a manufacturer.

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SALES AND SERVICE
FULL LINE OF AMATEUR RADIO AND CITIZENS BAND ACCESSORIES AND EQUIPMENT

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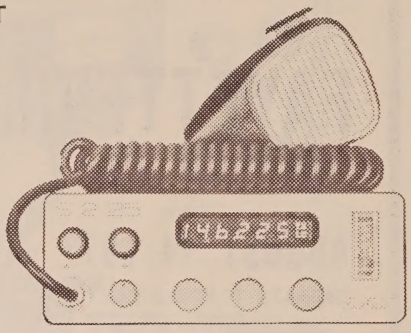
3902 HAMPTON RD & 158
CLEMMONS, NC

AEA
S225
SYNTHESIZED TRANSCEIVER



• SCANNERS • AMPLIFIERS • VEHICLE BURGLAR ALARMS

GRADY CRUMP

FINANCING AVAILABLE
VISA – MASTERCHARGE

DXing ON TWO METERS

Conditions on the two-meter band during July have been good to excellent almost daily. Short inversions occurred almost nightly .

On the evening of July 7th, two different repeater groups reporting hearing French speaking hams operating on their frequencies, and in one instance actually keying up the local machine. By 4:30 p.m. several hams in the Piedmont section of North Carolina and Southern Virginia had a funnel inversion mixed with some Sparotic "E" into Canada. Most stations were working Nova Scotia and New Brunswich stations for about two hours. Signals varyed from one "S" unit to 30 db over 9. Several Maine stations were also worked. The funnel closed at about 7:00 p.m. Most all contacts were made on 146.52, 55 and 58 on FM.

During the night of July 12th, two-meter SSB was open into the Mid-West and South. Local operators in the Carolinas were busy gaining new States on 2-SSB.

One coincidence worth mentioning happened the night of the FM inversion into Canada. WB4KJR, Bo Martin in Danville, Va. reported listening to a Vermont station talking on 10 meters to another station in the Mid-West. He was heard to comment on how those North Carolina boys were working the VE1's in Canada. Then he put his microphone beside his two meter rig and rebroadcast signals from K4MOB, Wayne in Colfax working VE1IVR . . . . and Bo said he recognized Wayne's voice being retransmitted through 10 meters from the Vermont station, even before he gave his call.

CAPE FEAR AMATEUR RADIO SOCIETY'S FIRST ANNUAL

FAYETTEVILLE HAMFEST

AUGUST 14, 1977 AT ROGER'S I-95 AIRPORT

TALK-IN FREQUENCIES: FM- 146.31/.91 , 146.115/715 , 52.07/53.07
HF- 3.923 Mhz

FLY-IN ..... 4500 FT SOD RUNWAY WITH PLENTY OF PARKING AND FREE TIE-DOWN.

ANTIQUE AIRPLANE DISPLAY ..... INCLUDING A "HEATH PARASOL" MODEL-1928

SWAPFEST .... PLENTY OF FREE PARKING AND FLEA MARKET SPACE FOOD AND DRINK WILL BE AVAILABLE.... MANY MOTELS AND FINE RESTAURANTS NEARBY

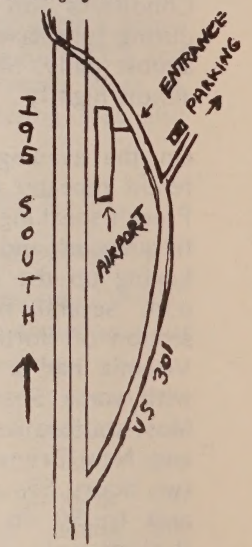
PRIZES ..... FIRST PRIZE - 2M FM,4 Mhz SYNTHESIZED in 5Khz steps. "AMCOMM" 1 to 25 Watts, LED readout. Other prizes to be announced !

AIRPLANE RIDES AVAILABLE.....The entire family would enjoy..

FCC EXAMS... NO APPOINTMENT NECCESSARY Begin at 0800 at Methodist College Science Building on 13 AUGUST 77 .

ADMISSION.... $ 2.00 at the Gate, includes Free parking and Flea-market space, if desired. Small charge for Commercial or Elect. outlets.

LOCATED... Roger's I-95 Airport is located 7 miles south of Fayetteville, NC off Hwy 301 South. Travelling south take US 301 south of "Hopemills" exit. Travelling north, take the "US 301 to Parkton 71" exit approx. ½ mile north of St Pauls exit.

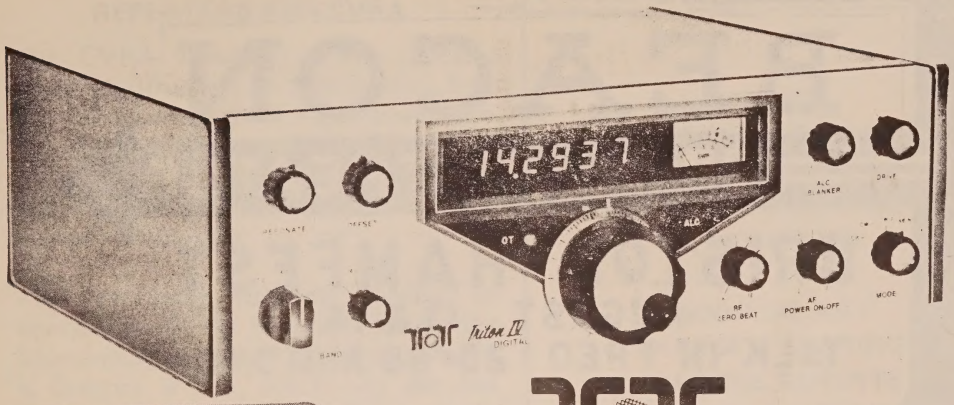


For Additional Information Write:
CFARS HAMFEST, BOX M-618
METHODIST COLLEGE
FAYETTEVILLE, NC 28301
or phone
LACY HARRIS, Chairman (919) 424-3900

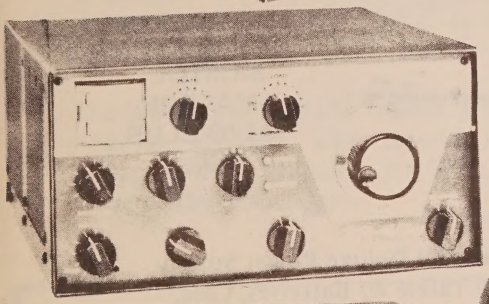
WE LOOK FORWARD TO SEEING YOU THERE !!!!

FCC EXAMS - PRIZES - FELLOWSHIP!

RADIO COMMUNICATIONS CO., INC.

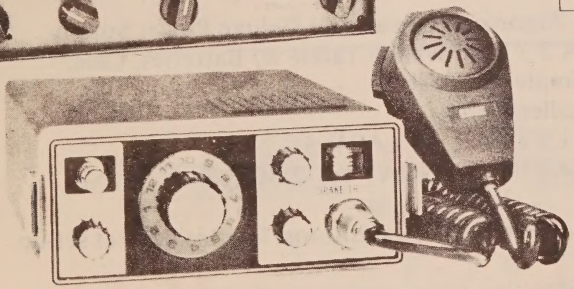


TEN-TEC, INC.



Vhf engineering

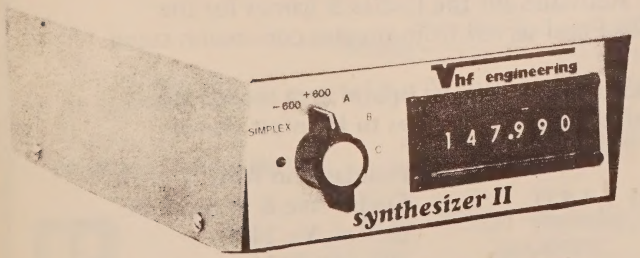
DRAKE

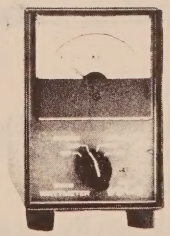


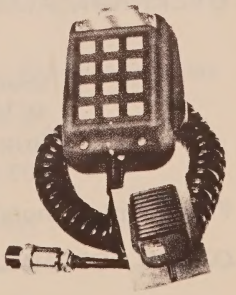
HUSTLER

Larsen Antennas

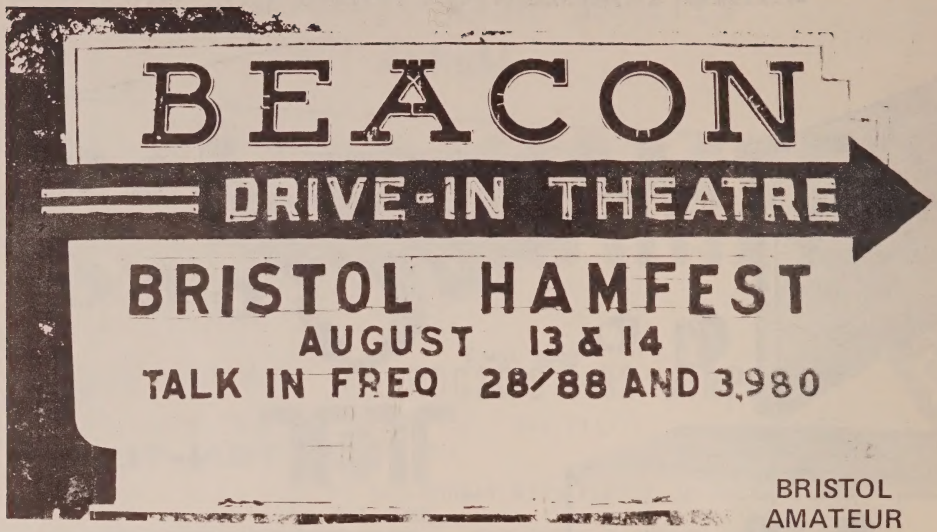
ROHN







RADIO COMMUNICATIONS COMPANY, INC.
311 Shenandoah Ave., N.W.
Roanoke, Virginia 24016
Area 703-342-8513



BRISTOL
AMATEUR
RADIO CLUB
INC.

Location — Beacon Drive - In Theater
Blountville Highway
Bristol, Tn 37620

Prizes — First – TEN TEC Argonaut, Linear, and Deluxe Power Supply
Second –WILSON 2.5 Watt Walkie Talkie w/ Batteries, Case, Charger and 52 Simplex Crystals.
Various Other Smaller Prizes.
SEPERATE PRIZES FOR THE LADIES.
MAIN PRIZE DRAWING SUNDAY AT 2:30 P.M.

Tickets — $ 1.00 Admission at Gate; $ 2.00 additional for flea market set-up.

Special Activities: Reduced Saturday night movie rates for those attending HAMFEST. Activities for the Ladies & games for the Children. Hot Food served from theater concession stand.

OVERNIGHT ACCOMMODATIONS: The following Bristol area motels are offering discount rates to Hamfest visitors

Beacon Motel
4670 Lee Hwy. (Exit 5, I-81)
Bristol, Va 24201
703-669-6322

Holiday Inn West
Euclid Ave.& W.State St.
Bristol, Va 24201
703-669-7171

Please contact motels directly for reservations.

OTHER ACCOMMODATIONS AVAILABLE.

SPARTENBURG AND WHITE OAK REPEATERS JOIN CVRA

The CVRA welcomes a new repeater under construction for Spartenburg, S.C. as a full member of the Association. Also the new WR4BDN repeater at White Oak Mt. North of Danville. The Greensboro WR4ANP 72-12 repeater has also renewed membership.

The new South Carolina repeater to operate on 69-09 is sponsored by the Spartenburg Amateur Radio Club. Trustee is Gregory Wilson, N4CC and the 2nd representative to the CVRA is Keith Lewis K4XP.

The White Oak repeater trustee is Amos Rhames, K4WQS, with second representative, Mike Williams, WA4JIY. Welcome to the Association.

WANTED
2–WAY RADIO TECHNICIAN

2 YEARS EXPERIENCE
GE, MOTOROLA

- GOOD SALARY
- PROFIT SHARING
- LARGE BENIFITS
- STABLE COMPANY

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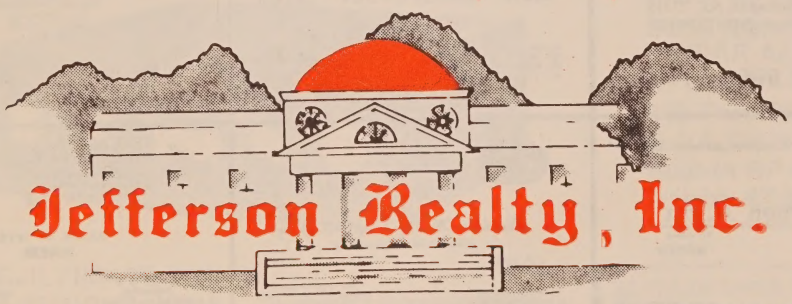

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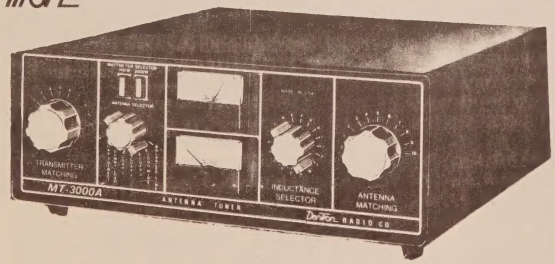

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I can promise you that we will do our level best to continue to deliver to you the finest publication we know how. No drastic changes will be seen immediately, but format changes and layout will come later. More feature articles will become evident in the Journal and a broader scope of Amateur radio will also be covered. Pictures of activities will be incorporated in our publication too.

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FUN . . . FUN . . . BUSINESS. . . AND MAINTENANCE

A meeting of the Board of Directors of the ENC Repeater, Inc., operators of WR4ABP in Grifton was held in June. The meeting was held under the trees near the base of the WITN tower, location of the 16-76 repeater.

An all-Saturday maintenance session was also held, with tours for members of the clubto go up on the 1500 foot tower and see the repeater first hand. This was a first opportunity for many members to see the repeater. They also experienced an exciting ride on the TV tower elevator. Several trips were made during the day, combining maintenance with tours at the same time.

Maurie Cox, K4JFN was elected by the board to serve as Membership Chairman, and Doug Burt, WB4UOU to assist Bill Page WB4LWX as an assistant secretary. Page is Secretary of the association. After adjournment of the directors meeting, the group joined in on tours and maintenance. (Bill WA4LWX)

SLOT NET ON NEW FREQ.

The S.L.O.T. (Sandlappers on Two) SSB net is now operating on a new frequency of 145.110 mhz. and a new time of 2130 local time. The net will continue to meet on Mondays, Wednesdays and Fridays. The frequency was changed since many "DX" operators tend to concentrate at the lower end of 145 and 145.100 seems to have become a "National Calling Frequency" for most of the country. (Jack WB4EFZ)

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